

REMARKS

Reconsideration of the above-identified application in view of the foregoing amendments and following remarks is respectfully requested.

By this paper the abstract is amended. This amendment is believed to resolve the objections of the April 5, 2006 Office Action at p. 2. Applicant notes, however, that the abstract has been amended to enable the United States Patent and Trademark Office and the public generally to determine quickly from a cursory inspection the nature and gist of the technical disclosure and to aid indexing, classifying and searching. 37 C.F.R. § 1.72(b); MPEP § 606.01. This amendment is ***not*** intended to narrow, limit, alter or otherwise characterize what Applicant regards as the invention. It is, of course, the claims and not abstract that defines the invention being claimed.

Claims 1-8 were pending in this application. By this paper, Applicant has amended claims 1, 2, and 7 and has added new claims 10-14. Additionally, Applicant has canceled claim 6 without prejudice or disclaimer.

Applicant has amended claim 1 to include the subject matter of original claim 6.

Applicant has amended claim 2 by changing “system forms further” to “system further.” This amendment is not made for any substantial reason related to patentability (§§ 102, 103). Applicant respectfully requests withdrawal of the objection to claim 2.

Applicant has amended claim 7 by changing “and an the” to “and the.” This amendment is not made for any substantial reason related to patentability (§§ 102, 103). Applicant respectfully requests withdrawal of the objection to claim 7. Applicant has also amended claim 7 to add “in the respective reflections at the reflective surface is negative.”

Support for this amendment is found throughout the application as originally filed, including for example at [0068] to [0069] of the Specification and figure 3 (surface A).

Applicant has added claim 9, which includes the subject matters of original claims 1 and 7. Applicant has added claims 10 to 14, which corresponds to the subject matter of original claims 2-5 and 8, respectively.

No new matter will be added to this application by entry of these amendments and new claims. Entry is respectfully requested.

Claim Rejections under 35 U.S.C. § 102(b)

The Examiner rejected claims 1, 3-5 and 7-8 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No, 6,222,676 to Togino et al. ("Togino") and claims 1, 3 and 5-8 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Publication 2002/0039232 to Takeyama ("Takeyama"). Applicant respectfully traverses these rejections.

In the amended claim 1, the second surface reflects the luminous flux reflected by the first surface back toward the first surface. In addition, light toward the first surface is reflected by the first surface again.

Togino et al. does not teach or suggest the subject matter of amended claim 1. In figure 1 of Togino, the prism member 20 does not reflect light twice at same reflective surface (corresponding to the first surface cited in amended claim 1). Accordingly, the optical system cited in the amended claim 1 is different from the optical system of Togino.

Takeyama also does not teach or suggest the subject matter of amended claim 1. In figure 14 of Takeyama, light from LCD 36 is reflected at the third surface 34, the first surface 32 and the second surface 33, in that order. The third surface 34 is different from the second surface

33. The light from the third surface 34 is reflected by the first surface 32 and advances to the second surface 33 different from the third surface 34. That is, light reflected by the first surface 32 does not reflect back toward the third surface 34. Accordingly, the optical system cited in the amended claim 1 is different from the optical system of Takeyama.

Even if it is considered that the third surface 34 and the second surface 33 are one surface, the reflecting direction of light at the third surface 34 is the same as the reflecting direction of light at the second surface 33. That is, a central principal ray of luminous flux does not travel toward a substantially opposite side to a reflecting side in the previous reflection with respect to a normal to the surface at a hit point of the central principal ray. Thus, the optical system cited in the amended claim 1 is different from the optical system of Takeyama.

Accordingly, claim 1 is allowable as drafted and Applicant respectfully requests withdrawal of the rejection. Additionally, because claims 2-5, 7-8 depend from claim 1, these claims should also be allowable as drafted. Applicant respectfully requests withdrawal of the rejections.

Newly Added Claims

Regarding newly added claim 9, it is claimed that the first optical element reflects the luminous flux a plurality of times by a reflective surface (serving as one surface).

On the other hand, in figure 1 of Togino, light from the light source 5 is reflected only one time at respective surfaces 22 and 23. That is, light from the light source 5 is not reflected a plurality of times at one surface. Accordingly, the optical system cited in claim 9 is different from the lens system of Togino.

In figure 14 of Takeyama, as describe above, the reflecting direction of light at the surface 34 is the same as the reflecting direction of light at the surface 33. In this case, an inner product which is formed between outer products each formed by a vector indicating incident light (light incident on the surface 33 or 34) and a vector indicating reflected light (light reflected by the surface 33 or 34) in the respective reflections is positive (not negative). Accordingly, the optical system cited in claim 9 is different from the optical system of Takeyama.

Accordingly, claim 9 is allowable as drafted. Additionally, because claims 10-14 depend from claim 9, these claims should also be allowable as drafted.

Claim Rejections under 35 U.S.C. § 103(a)

The Examiner rejected claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Togino in view of U.S. Patent Publication 2002/0180907 to Imamura et al. ("Imamura"). Claim 2 depends from claim 1, which, as discussed above, is in allowable form. Accordingly claim 2 is allowable as drafted and Applicant respectfully requests withdrawal of the rejection.

Applicant has chosen in the interest of expediting prosecution of this patent application to distinguish the cited documents from the pending claims as set forth above. These statements should not be regarded in any way as an admission that the cited documents are, in fact, prior art. Likewise, Applicant has not specifically addressed the rejections of the dependent claims. Applicants respectfully submit that the independent claims, from which they depend, are in condition for allowance as set forth above. Accordingly, the dependent claims are also in condition for allowance. Applicant, however, reserves the right to address such rejection of the dependent claims in the future as appropriate.

CONCLUSION

For the above-stated reasons, this application is respectfully asserted to be in condition for allowance. An early and favorable examination on the merits is requested.

While no fees or extension of time are believed necessary for this Amendment, should an extension of time be required for the timely submission of this paper, such extension is hereby petitioned, and the Commissioner is hereby authorized to charge any additional fees which may be required for this Amendment, or credit any overpayment, to Deposit Account No. 13-4500, Order No. 1232-5416.

In the event that a telephone conference would facilitate the examination of this application in any way, the Examiner is invited to contact the undersigned at the number provided. THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED FOR THE TIMELY CONSIDERATION OF THIS AMENDMENT UNDER 37 C.F.R. §§ 1.16 AND 1.17, OR CREDIT ANY OVERPAYMENT TO DEPOSIT ACCOUNT NO. 13-4500, ORDER NO. 1232-5416.

Respectfully submitted,
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